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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/737,127	12/17/2003	Mark S. Zediker	NUV.006 DIV	6026

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EXAMINER

HEALY, BRIAN

ART UNIT PAPER NUMBER

2883

DATE MAILED: 08/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/737,127

Applicant(s)

ZEDIKER ET AL.

Examiner

Brian M. Healy

Art Unit

2883

Am

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-109 is/are pending in the application.
- 4a) Of the above claim(s) 2-83 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-21 and 90-109 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-8 and 84-87 is/are rejected.
- 7) ☒ Claim(s) 5, 9, 88 and 89 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 08052004.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Brian M. Healy

DETAILED ACTION***Allowable Subject Matter***

Claims 5,9 ,88, and 89 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the references of record teaches or suggests using a tailored index single mode optical amplifier whose tailored index is varied by varying the thermal impedance characteristic of the junction of the heat sink. None of the references teaches coupling elements for coupling optical signals into and out of the surface of the semiconductor device with the semiconductor device including an optical phased array having N output amplifiers where each of the output optical amplifiers comprises a tailored index single mode amplifiers.

Claims 10-21 and 90-109 are allowed over the prior art of record teaches or suggests a semiconductor device comprising: at least one tailored index single mode optical amplifier using an input and output optical waveguide/coupling means. Also, the tailored index single mode optical amplifier is not used in conjunction with a distribution network, phase modulator array with the amplifiers, phase modulators and distributed network are disposed upon a single substrate.

Claims 22-83 have been cancelled by Applicant.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2883

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-4,6-8, and 84-87 are rejected under 35 U.S.C. 102(e) as being anticipated by LaComb, U.S.P. No.6,256,330.

LaComb 330' teaches (Figs.1-7) a semiconductor device (Note Col.2, lines 1-45 teaches the use of phased laser arrays) comprising:at least one tailored index single mode optical laser amplifier with a ridge waveguide 112 that is gain tailored and index tailored along two axes using current confinement using electrode 110 ,111 and selective doping of layers 106,104,103,102,101, which clearly, fully meets Applicant's claimed limitations.

A copy of PTO-1449 will be included in this office action.

The following references are also cited by the Examiner as being pertinent prior art: Bott et. al., U.S.P. No.5,694,408 (Figs.1-13), Zediker et. al., U.S. Patent Application Publication No. U.S, 2004/0125846A1 (Note entire reference.), Mehuys et. al., U.S.P. No.5,561,018 (Figs.1-32), Welch et. al., U.S.P.

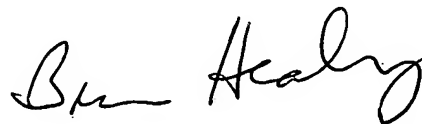
Art Unit: 2883

No.5,440,576(Figs.1-10) and Holonyak, Jr. et. al., U.S.P. No.5,403,775 (Figs.1-22).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian M. Healy whose telephone number is (571)272-2347. The examiner can normally be reached on Compressed Schedule Tues-Thurs,7AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571)272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brian M. Healy
Primary Examiner
Art Unit 2883

A handwritten signature in black ink, appearing to read "Brian Healy", is written over a faint, larger version of the same signature.

Brian Healy
Primary Examiner